

Set	Items	Description
S1	17279645	DUAL OR TWO OR TWIN? ? OR TWOFOLD? OR DOUBLE? OR SEPARAT?
S2	253493	AIR()FLOW? OR AIRFLOW? OR AIRSTREAM? OR AIR()STREAM?
S3	1320015	PRINTER? OR PRINT?????? OR MARK?????(3N)ENGINE????
S4	11923503	TEMPERAT? OR PRESSURE? OR MOISTURE? OR HUMIDIT?
S5	10619264	THERMODYNAMIC? OR THERMO()DYNAMIC? OR TEMPERAT? OR THERMAL?
S6	7123	S1(3N)S2
S7	5275	(PRIMAR? OR SECOND?)(3N)S2
S8	127	S3 AND (S6 OR S7)
S9	52	S8 AND (S4 OR S5)
S10	52	RD (unique items)
S11	5	S10 AND DIVID?
S12	47	S10 NOT S11
S13	46	S12 AND PY<=2004

? show files

File 2:INSPEC 1969-2005/Apr W2  
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File 6:NTIS 1964-2005/Apr W2  
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File 8:Ei Compendex(R) 1970-2005/Apr W2  
(c) 2005 Elsevier Eng. Info. Inc.

File 34:SciSearch(R) Cited Ref Sci 1990-2005/Apr W3  
(c) 2005 Inst for Sci Info

File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec  
(c) 1998 Inst for Sci Info

File 99:Wilson Appl. Sci & Tech Abs 1983-2005/Mar  
(c) 2005 The HW Wilson Co.

File 94:JICST-EPlus 1985-2005/Mar W1  
(c)2005 Japan Science and Tech Corp(JST)

File 92:IHS Intl.Stds.& Specs. 1999/Nov  
(c) 1999 Information Handling Services

File 144:Pascal 1973-2005/Apr W2  
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File 647:CMP Computer Fulltext 1988-2005/Apr W1  
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File 35:Dissertation Abs Online 1861-2005/Mar  
(c) 2005 ProQuest Info&Learning

File 65:Inside Conferences 1993-2005/Apr W3  
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File 103:Energy SciTec 1974-2005/Apr B1  
(c) 2005 Contains copyrighted material

File 350:Derwent WPIX 1963-2005/UD,UM &UP=200525  
(c) 2005 Thomson Derwent

File 347:JAPIO Nov 1976-2004/Dec(Updated 050405)  
(c) 2005 JPO & JAPIO

File 239:Mathsci 1940-2005/Jun  
(c) 2005 American Mathematical Society

File 95:TEME-Technology & Management 1989-2005/Mar W2  
(c) 2005 FIZ TECHNIK

File 25:Weldasearch-19662005/Mar  
(c) 2005 TWI Ltd

File 62:SPIN(R) 1975-2005/Jan W5  
(c) 2005 American Institute of Physics

File 96:FLUIDEX 1972-2005/Apr  
(c) 2005 Elsevier Science Ltd.

File 98:General Sci Abs/Full-Text 1984-2004/Dec  
(c) 2005 The HW Wilson Co.

File 266:FEDRIP 2005/Jan  
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11/9/1 (Item 1 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
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010938853 \*\*Image available\*\*

WPI Acc No: 1996-435803/199644

XRPX Acc No: N96-367213

**Laser printer with secure cooling - has electrostatic image developer and transfer to recording medium mechanism, fixing facility and air flow generation surrounding scanner**

Patent Assignee: SHARP KK (SHAF )

Inventor: AIBA M; AWATA T; MORIMOTO K; MORIYAMA K; MURAKAMI S; YUI Y

Number of Countries: 004 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 735399	A1	19961002	EP 96104790	A	19960326	199644 B
JP 8262960	A	19961011	JP 9570070	A	19950328	199651
US 5771055	A	19980623	US 96625020	A	19960328	199832
JP 3153726	B2	20010409	JP 9570070	A	19950328	200122
EP 735399	B1	20010801	EP 96104790	A	19960326	200144
DE 69614169	E	20010906	DE 614169	A	19960326	200159
			EP 96104790	A	19960326	

Priority Applications (No Type Date): JP 9570070 A 19950328

Cited Patents: 4.Jnl.Ref; EP 618469; JP 58046317; JP 62144129; JP 6331920; JP 6337365

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
EP 735399	A1	E 31	G02B-026/12	
			Designated States (Regional): DE GB	
JP 8262960	A	13	G03G-021/20	
US 5771055	A		B41J-002/385	
JP 3153726	B2	15	G03G-021/20	Previous Publ. patent JP 8262960
EP 735399	B1	E	G02B-026/12	
			Designated States (Regional): DE GB	
DE 69614169	E		G02B-026/12	Based on patent EP 735399

Abstract (Basic): EP 735399 A

The laser **printer** has positive cooling for heat generating parts. A rotor (43) of the motor for rotating a scanner mirror (29) of a scanning device (28) is surrounded by a cover (45). An air flow inlet port (46) and an air flow outlet port (47) are formed on the sides of the cover.

An **air flow separation** member (48) partially **divides** the rotating air flow (51) generated around the rotor in the proximity of the air flow outlet port, and generates the discharge air flow (53), which in turn is discharged out of the cover. A suction air flow (54) is introduced from the air flow inlet port to the interior of the cover which is now negative in **pressure**.

ADVANTAGE - Load on power supply in **printer** is reduced thus enabling smaller unit to be used and also noise from **printer** is reduced.

Dwg.15/17

Title Terms: LASER; **PRINT**; SECURE; COOLING; ELECTROSTATIC; IMAGE; DEVELOP  
; TRANSFER; RECORD; MEDIUM; MECHANISM; FIX; FACILITY; AIR; FLOW; GENERATE  
; SURROUND; SCAN

Derwent Class: P75; P81; P84; S06; T04; W02

International Patent Class (Main): B41J-002/385; G02B-026/12; G03G-021/20

International Patent Class (Additional): B41J-002/44; G02B-005/08;

G02B-026/10; G03G-013/04; G03G-015/04; G03G-021/00; H04N-001/00;

H04N-001/04  
File Segment: EPI; EngPI  
Manual Codes (EPI/S-X): S06-A03F; T04-G04A2; T04-L05; W02-J02B2B; W02-J05

11/9/4 (Item 4 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
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001039225  
WPI Acc No: 1974-D5270V/197423

**Intermittently operated powder spray for printed sheet - has minimum pressure valve which divides main pressure air flows into two separate flows**

Patent Assignee: ADAMOVSKA STROJIRNY NP (ADAN )

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 1475169	B	19740530				197423 B

Priority Applications (No Type Date): CS 653750 A 19650610

Title Terms: INTERMITTENT; OPERATE; POWDER; SPRAY; **PRINT** ; SHEET; MINIMUM;

**PRESSURE** ; VALVE; **DIVIDE** ; MAIN; **PRESSURE** ; AIR; FLOW; TWO; SEPARATE;

FLOW

Derwent Class: P74

International Patent Class (Additional): B41F-023/04

File Segment: EngPI

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13/9/21 (Item 8 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
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011104389 \*\*Image available\*\*  
WPI Acc No: 1997-082314/ 199708  
XRPX Acc No: N97-068177

**Blocking prevention appts. of print paper for printer - has first and second air nozzles whose air flow are utilised in blowing solvent vapour of printing ink according to print space which contacts first and second cooling roller on print paper side**

Patent Assignee: KONDO UNYU KIKO KK (KOND-N)  
Number of Countries: 001 Number of Patents: 002  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 8323959	A	19961210	JP 95133077	A	19950531	199708 B
JP 3462624	B2	20031105	JP 95133077	A	19950531	200377

Priority Applications (No Type Date): JP 95133077 A 19950531

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 8323959	A		4	B41F-023/04	
JP 3462624	B2		4	B41F-023/04	Previous Publ. patent JP 8323959

Abstract (Basic): JP 8323959 A

The appts. has first and second air nozzles (8,9) connected to the edge side of a first cooling roller (4). The air nozzles discharge air to which a **print** paper (3) is traversing. The **printing** ink adheres to the **print** paper which passes from the cooling roller to a drying appts. with high **pressure** air supply. The first nozzle arranged in the position which contacts the first cooling roller before the air flow contacts the first cooling roller. The air flow of the first cooling nozzle blows the solvent vapour of the **printing** ink on to a **print** space to which the first cooling roller and the **print** paper contacts.

The second air nozzle arranged in the position which contacts the second cooling roller of the **print** paper before the **air flow** contacts the **second** cooling roller. The **air flow** of the **second** air nozzle blows the solvent vapour of the **print** ink according to the **print** space which contacts to the second cooling roller on the **print** paper.

ADVANTAGE - Minimises high **pressure** air consumption by utilising air nozzles. Prevents blocking phenomenon using simple structure compsn. Reduces installation and operation cost by utilising small compressor as high **pressure** air supply.

Dwg.2/4

Title Terms: BLOCK; PREVENT; APPARATUS; **PRINT** ; PAPER; **PRINT** ; FIRST; SECOND; AIR; NOZZLE; AIR; FLOW; UTILISE; BLOW; SOLVENT; VAPOUR; **PRINT** ; INK; ACCORD; **PRINT** ; SPACE; CONTACT; FIRST; SECOND; COOLING; ROLL; **PRINT** ; PAPER; SIDE

Derwent Class: P74

International Patent Class (Main): B41F-023/04

File Segment: EngPI

13/9/29 (Item 16 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
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009593848

WPI Acc No: 1993-287394/ 199336

XRPX Acc No: N93-221098

**Air flow path switching device for printer - with different flow paths  
provided between blower and two sheet pick-ups**

Patent Assignee: HITACHI KOKI KK (HITO )

Inventor: GUNJI Y; NAKURA M; TERAOKA A

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5240237	A	19930831	US 91789608	A	19911108	199336 B

Priority Applications (No Type Date): JP 90337689 A 19901130

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5240237	A		5	B65H-003/44	

Abstract (Basic): US 5240237 A

The switching device includes at least one sheet hopper which accommodates sheets to be **printed**. A sheet switchback unit inverts the sheets so that the sheets may be **printed** on both sides. A first sheet pick up is associated with each of the at least one sheet hopper for picking up the sheets. A second sheet pick up is associated with the sheet switchback for picking up the sheets. A blower applies **pressured** air to the first and second sheet pickup.

A first air flow path is defined between the first sheet pickup and the blower through an **air flow** path switch. A **second air flow** path is defined between second sheet pickup and blower directly. An air sucking **pressure** in the sheet switchback, when the first sheet pickup is connected to the blower, and the air sucking **pressure** in the sheet switchback, when the first sheet pickup is disconnected from the blower are equivalent.

USE/ADVANTAGE - For setting flow of sheet in cut sheet laser **printer**. Improved reliability in sheet feeding.

Dwg.1/6

Title Terms: AIR; FLOW; PATH; SWITCH; DEVICE; **PRINT**; FLOW; PATH; BLOW;  
TWO; SHEET; PICK; UPS

Index Terms/Additional Words: AIR; FLOW; PATH

Derwent Class: Q36; T04

International Patent Class (Main): B65H-003/44

File Segment: EPI; EngPI

Manual Codes (EPI/S-X): T04-G06A

13/9/32 (Item 19 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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008286182 \*\*Image available\*\*

WPI Acc No: 1990-173183/ 199023

XRPX Acc No: N90-134679

**Touch up appts. for magnetographic printer - re-introduces developer  
particles to reservoir at atmospheric pressure after recovering them  
from airflow with separation appts.**

Patent Assignee: BULL SA (SELA )

Inventor: BRECY A; POINSOT P

Number of Countries: 009 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 371842	A	19900606	EP 89403101	A	19891109	199023 B
FR 2639726	A	19900601				199029

US 4972203	A	19901120	US 89442202	A	19891128	199049
EP 371842	B1	19930721	EP 89403101	A	19891109	199329
DE 68907698	E	19930826	DE 607698	A	19891109	199335
			EP 89403101	A	19891109	
CA 1325239	C	19931214	CA 615174	A	19890929	199405

Priority Applications (No Type Date): FR 8815596 A 19881129  
 Cited Patents: 1.Jnl.Ref; DE 1772826; EP 86683; JP 53003240; US 4046682; US 4246588; US 4377334; JP 533240

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes	
EP 371842	A					
		Designated States (Regional): AT DE FR GB IT NL SE				
EP 371842	B1	F	20	G03G-021/00		
		Designated States (Regional): AT DE FR GB IT NL SE				
DE 68907698	E			G03G-021/00	Based on patent EP 371842	
CA 1325239	C	F		G03G-021/00		

Abstract (Basic): EP 371842 A

The device, located between the developer reservoir (15) and the separation apparatus (26), consists of a channel (61) into which the output pipe (47) of the separator discharges. Inside the channel is a transport element (65), in which is a cavity (67), the particles of developer which have accumulated in the separator fall into the cavity. The element is moved to the right by the drive rollers (66D), or to the left by the drive rollers (66G).

In moving the element to the right, the cavity, and its contents is also moved to the right until position P1 is reached, when the powder falls into the developer reservoir. The element is then moved to the left so that the cavity is again aligned with the output pipe of the separation apparatus.

ADVANTAGE - Surplus developer removed from cyclone separator to reservoir without opening separator to atmospheric **pressure**, which would disturb operation of cyclone. (19pp Dwg.No.2/7)

Abstract (Equivalent): EP 371842 B

A device for reintroducing, into a tank (15) open to the open air, solid particles of developer which have been separated from a gaseous carrier flow with the aid of a low **pressure** separator apparatus (26), the apparatus comprising a separation chamber (40) furnished in its lower part with a discharge pipe (47), the device comprising a carrier element (65) positioned in front of and below the discharge pipe, the carrier element enabling the particles of developer which fall from the pipe onto the carrier element to be carried to a discharge point (P1), above the tank, and to fall into the tank, the device also being characterised: in that it comprises a passage (61) passing in front of and below the discharge pipe, and provided with an opening enabling the pipe to open into the passage, and in that the carrier element (65) is designed to slide inside the passage whilst producing almost total isolation of the discharge pipe with respect to the external atmospheric **pressure**, the carrier element being provided with at least one cavity (67) which, when the element is brought into the rest position, is facing the lower end (64) of the discharge pipe and enables the particles of developer which fall into the pipe to accumulate in the cavity, and in that it comprises a driving means (66G, 66D or 76, 77) for driving the carrier element (65) along a predetermined path enabling the cavity (67) to be brought to a discharge point (P1) above the tank, so as to drop the particles which had accumulated in the cavity into the tank, and to then return the carrier element to the rest position.

(Dwg.1/7c

Abstract (Equivalent): US 4972203 A

The device serves for the reintroduction of solid developer particles, which have been separated from a gaseous carrier flow, into a reservoir that is open to the air. The device (60) is disposed between the reservoir (15) and the apparatus (26) for separation and recovery of particles, and it includes a chute (61) into which the discharge conduit (47) of the apparatus discharges. A transport element (65) that slides inside the chute (61) isolates the discharge conduit from ambient atmospheric **pressure**. The transport element is provided with a cavity (67) in which the particles that drop into the conduit accumulate, and the accumulate particles are then transported outside the chute and drop into the reservoir (15). USE - Non-impact **printing** machines.

(16pp)

Title Terms: TOUCH; UP; APPARATUS; MAGNETOGRAPHIC; **PRINT** ; INTRODUCING; DEVELOP; PARTICLE; RESERVOIR; ATMOSPHERE; **PRESSURE** ; AFTER; RECOVER; AIRFLOW; SEPARATE; APPARATUS

Derwent Class: P75; P84; S06; T04

International Patent Class (Main): G03G-021/00

International Patent Class (Additional): B41J-002/41; G03G-015/08; G03G-019/00

File Segment: EPI; EngPI

Manual Codes (EPI/S-X): S06-A04A; S06-A08; S06-A10; T04-G09

**13/9/38 (Item 2 from file: 347)**

DIALOG(R)File 347:JAPIO

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05354501 \*\*Image available\*\*

CLEANING DEVICE OF INK-JET RECORDING HEAD

PUB. NO.: 08-310001 [JP 8310001 A]

PUBLISHED: November 26, 1996 ( **19961126**)

INVENTOR(s): ITO HIDETOSHI

APPLICANT(s): SANYO ELECTRIC CO LTD [000188] (A Japanese Company or Corporation), JP (Japan)

APPL. NO.: 07-123910 [JP 95123910]

FILED: May 23, 1995 (19950523)

INTL CLASS: [6] B41J-002/165; B41J-002/18; B41J-002/185

JAPIO CLASS: 29.4 (PRECISION INSTRUMENTS -- Business Machines)

JAPIO KEYWORD:R105 (INFORMATION PROCESSING -- Ink Jet **Printers** )

#### ABSTRACT

PURPOSE: To obtain a small-sized and highly efficient cleaning device by a method wherein the solvent in a solvent tank is sucked out through a throttled part by injecting air so as to be jetted against a recording head in order to clean the head and, at the same time, the wash is sucked and discharged by means of an air flow passing through the other throttled part.

CONSTITUTION: When a pump 6 in the cleaning device is put into actuation so as to jet air into a first and a **second air flow** paths 7 and 8, the speed of the air becomes large near a throttled part 7c, resulting in sucking the solvent 9 in a solvent tank 10 in accordance with Bernoulli's law and vigorously jetting the solvent through an opening part 7a against a recording head 1. Thus, the bonded matter of the nozzle 2 is melted, resulting in performing cleaning. Further, the speed of air injected into the **second air flow** path becomes large near a throttled part 8a, resulting in lowering the **pressure** in a suction pipe 11 and consequently sucking the wash together with air from an opening part 11a into the

second air flow path 8 and introducing in an ink sucking device 12 in order to catch the wash at a filter 12a.

13/9/40 (Item 4 from file: 347)  
DIALOG(R)File 347:JAPIO  
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04396160 \*\*Image available\*\*  
**THERMAL COLOR PRINTER**

PUB. NO.: 06-040060 [JP 6040060 A]  
PUBLISHED: February 15, 1994 ( 19940215)  
INVENTOR(s): ARIMOTO KAZUAKI  
APPLICANT(s): MITSUBISHI ELECTRIC CORP [000601] (A Japanese Company or Corporation), JP (Japan)  
APPL. NO.: 04-246318 [JP 92246318]  
FILED: September 16, 1992 (19920916)  
INTL CLASS: [5] B41J-002/325; B41J-035/04  
JAPIO CLASS: 29.4 (PRECISION INSTRUMENTS -- Business Machines)  
JOURNAL: Section: M, Section No. 1606, Vol. 18, No. 258, Pg. 158, May 17, 1994 (19940517)

#### ABSTRACT

PURPOSE: To provide a **thermal color printer** capable of producing high quality **printing** by a method wherein variation of the coefficient of friction  $\mu$ s and the  $\mu$ s values are minimized and misregistration is prevented even in the case where the reverse side of an ink sheet is damaged by **printing**.

CONSTITUTION: A separating bar 6 that separates an ink sheet 5 from recording paper 4 after transfer is made is provided, an air-blowing port 7a facing the sheet passage is provided to the separating bar 6, and the ink sheet 5 can be lifted off from the **separating bar 6** by **airflow 8**.  
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